

### 1. IDENTIFICATION

<b>Product Name</b>	<b>Limestone</b>
<b>Other Names</b>	No Data Available
<b>Uses</b>	No Data Available
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	No Data Available
<b>Chemical Name</b>	Limestone
<b>Product Description</b>	No Data Available

#### Contact Details of the Supplier of this Safety Data Sheet

<b>Organisation</b>	<b>Location</b>	<b>Telephone</b>
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

#### Emergency Contact Details

*For emergencies only; DO NOT contact these companies for general product advice.*

<b>Organisation</b>	<b>Location</b>	<b>Telephone</b>
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

### 2. HAZARD IDENTIFICATION

**Poisons Schedule (Aust)** Not scheduled

#### Globally Harmonised System

**Hazard Classification** NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

**Signal Word** None

### National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

**Dangerous Goods Classification** NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Limestone	No Data Available	1317-65-3	100 %

## 4. FIRST AID MEASURES

### Description of necessary measures according to routes of exposure

<b>Swallowed</b>	Immediately give large quantities of water to drink. If symptoms persist, call a physician. Do NOT induce vomiting.
<b>Eye</b>	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Rinse thoroughly with plenty of water, also under the eyelids.
<b>Skin</b>	Carefully and gently brush the contaminated body surfaces in order to remove all traces of product. Wash affected area immediately with plenty of water. Remove contaminated clothing. If symptoms persist, call a physician.
<b>Inhaled</b>	Move to fresh air. If symptoms persist, call a physician.
<b>Advice to Doctor</b>	No Data Available
<b>Medical Conditions Aggravated by Exposure</b>	No Data Available

## 5. FIRE FIGHTING MEASURES

<b>General Measures</b>	Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk.
<b>Flammability Conditions</b>	The substance is not flammable.
<b>Extinguishing Media</b>	In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions.
<b>Hazardous Products of Combustion</b>	When heated above 600°C, calcium carbonate decomposes to produce calcium oxide (CaO) and carbon dioxide (CO <sub>2</sub> ).
<b>Special Fire Fighting Instructions</b>	Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
<b>Personal Protective Equipment</b>	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves).
<b>Flash Point</b>	No Data Available
<b>Lower Explosion Limit</b>	No Data Available
<b>Upper Explosion Limit</b>	No Data Available
<b>Auto Ignition Temperature</b>	>400 °C
<b>Hazchem Code</b>	No Data Available

## 6. ACCIDENTAL RELEASE MEASURES

<b>General Response Procedure</b>	Avoid accidents, clean up immediately. May be slippery when spilt. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Use clean, non-sparking tools and equipment.
<b>Clean Up Procedures</b>	Use vacuum suction unit, or shovel into bags. Pick up and arrange disposal without creating dust. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.
<b>Containment</b>	Stop leak if safe to do so. Isolate the danger area.
<b>Environmental Precautionary Measures</b>	Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management.
<b>Evacuation Criteria</b>	Evacuate all unnecessary personnel.
<b>Personal Precautionary Measures</b>	Personnel involved in the clean up should wear full protective clothing as listed in section 8

## 7. HANDLING AND STORAGE

<b>Handling</b>	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product dust/fumes
<b>Storage</b>	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Do not store near acids. Store away from incompatible materials as listed in section 10. Protect from direct sunlight, moisture and static discharges. This product is not classified dangerous for transport according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.
<b>Container</b>	Store in original packaging as approved by manufacturer.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	Calcium carbonate : Time weighted average Respirable dust, 4 mg/m <sup>3</sup> Calcium carbonate : Time weighted average inhalable dust 10 mg/m <sup>3</sup>
<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	No information available on biological limit values for this product.
<b>Engineering Measures</b>	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Adequate ventilation should be provided so that exposure limits are not exceeded.
<b>Personal Protection Equipment</b>	RESPIRATOR: Wear a P1 or P2 particulate respirator when handling this product (AS1715/1716). EYES: Safety glasses with side shields (AS1336/1337). HANDS: Neoprene gloves (AS2161). CLOTHING: Long-sleeved protective coveralls and safety footwear (AS3765/2210).
<b>Work Hygienic Practices</b>	Avoid inhalation, ingestion and contact with skin and eyes. General occupational hygiene measures are required to ensure safe handling of the substance. These measures involve good personal and housekeeping practices (i.e. regular cleaning with suitable cleaning devices), no drinking, eating and smoking at the workplace. Shower and change clothes at end of work shift. Do not wear contaminated clothing at home.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solid
<b>Appearance</b>	Powder
<b>Odour</b>	Odourless

<b>Colour</b>	White off-white beige
<b>pH</b>	8 - 9 20 mg/l at 25 Deg C
<b>Vapour Pressure</b>	No Data Available
<b>Relative Vapour Density</b>	No Data Available
<b>Boiling Point</b>	No Data Available
<b>Melting Point</b>	>600 °C
<b>Freezing Point</b>	No Data Available
<b>Solubility</b>	16,6 mg/l 20°C OECD Test Guideline 105
<b>Specific Gravity</b>	No Data Available
<b>Flash Point</b>	No Data Available
<b>Auto Ignition Temp</b>	>400 °C
<b>Evaporation Rate</b>	No Data Available
<b>Bulk Density</b>	900 - 1.500 kg/m <sup>3</sup> at 20 Deg C
<b>Corrosion Rate</b>	No Data Available
<b>Decomposition Temperature</b>	>600 °C
<b>Density</b>	2.710 - 2.940 g/cm <sup>3</sup> Relative
<b>Specific Heat</b>	No Data Available
<b>Molecular Weight</b>	100,09 g/mol
<b>Net Propellant Weight</b>	No Data Available
<b>Octanol Water Coefficient</b>	No Data Available
<b>Particle Size</b>	No Data Available
<b>Partition Coefficient</b>	No Data Available
<b>Saturated Vapour Concentration</b>	No Data Available
<b>Vapour Temperature</b>	No Data Available
<b>Viscosity</b>	No Data Available
<b>Volatile Percent</b>	No Data Available
<b>VOC Volume</b>	No Data Available
<b>Additional Characteristics</b>	No Data Available
<b>Potential for Dust Explosion</b>	No Data Available
<b>Fast or Intensely Burning Characteristics</b>	No Data Available
<b>Flame Propagation or Burning Rate of Solid Materials</b>	No Data Available
<b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b>	No Data Available
<b>Properties That May Initiate or Contribute to Fire Intensity</b>	No Data Available
<b>Reactions That Release Gases or Vapours</b>	No Data Available
<b>Release of Invisible Flammable Vapours and Gases</b>	No Data Available

## 10. STABILITY AND REACTIVITY

<b>General Information</b>	No oxidising properties. (Based on the chemical structure, the substance does not contain a surplus of oxygen or any structural groups known to be correlated with a tendency to react exothermically with combustible material).
<b>Chemical Stability</b>	Stable under recommended storage conditions.
<b>Conditions to Avoid</b>	Avoid excessive heat, generating dust, direct sunlight, moisture and high temperatures.
<b>Materials to Avoid</b>	The product reacts exothermically with acids
<b>Hazardous Decomposition Products</b>	Decomposes by reaction with strong acids.

## 11. TOXICOLOGICAL INFORMATION

### General Information

Oral LD50 > 2000 mg/kg bw (OECD 420, rat)  
Dermal LD50 > 2000 mg/kg bw (OECD 402, rat)  
Inhalation LC50 (4h) > 3 mg/L air (OECD 403, rat) The substance is of low order of acute toxicity by inhalation, dermal and oral routes of exposure.  
Does not cause skin sensitisation. In vitro tests did not show mutagenic effects.  
Calcium (administered as Ca-lactate) is not carcinogenic (experimental result, rat). The pH effect of the product does not give rise to a carcinogenic risk. Human epidemiological data support lack of any carcinogenic potential of the product. Classification for carcinogenicity is not warranted.  
Calcium (administered as Ca-carbonate) is not toxic to reproduction (experimental result, mouse). The pH effect does not give rise to a reproductive risk.  
Human epidemiological data support lack of any potential for reproductive toxicity of the product. Both in animal studies and human clinical studies on various calcium salts no reproductive or developmental effects were detected

### Skin Irritant

Not irritating.

### Eye Irritant

Not irritating

### Carcinogen Category

No Data Available

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Oncorhynchus mykiss (rainbow trout); LC50 >100% v/v; 96 h; OECD Test Guideline 203; Exceeds maximum solubility of substance.  
Desmodesmus subspicatus (green algae); EC50; 72 h; > 14 mg/l; OECD Test Guideline 201; Exceeds maximum solubility of substance.  
Activated sludge; EC50; 3 h; > 1.000 mg/l; OECD Test Guideline 209; Not toxic.  
Daphnia magna (Water flea); LC50 >100% v/v; 48 h; OECD Test Guideline 202; Exceeds maximum solubility of substance.  
Soil microorganisms; EC50; 28 d; OECD Test Guideline 216; Not toxic Eisenia fetida (earthworms); LC50; 14 d; OECD Test Guideline 207; Not acutely toxic.  
Avena sativa (oats); EC50; 21 d; OECD Test Guideline 208; Not acutely toxic.

### Persistence/Degradability

The methods for determining biodegradability are not applicable to inorganic substances.

### Mobility

Calcium carbonate is sparingly soluble, and so presents a low mobility in most ground.

### Environmental Fate

Do NOT let product reach waterways, drains and sewers.

### Bioaccumulation Potential

Not relevant for inorganic substances.

### Environmental Impact

No Data Available

## 13. DISPOSAL CONSIDERATIONS

### General Information

Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.

### Special Precautions for Land Fill

Contact a specialist disposal company or the local waste regulator for advice. Incinerate at an approved site following all local regulations. This material may be suitable for approved landfill.

## 14. TRANSPORT INFORMATION

**Land Transport (Australia)**

ADG Code

<b>Proper Shipping Name</b>	LIMESTONE
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

**Land Transport (Malaysia)**

ADR

<b>Proper Shipping Name</b>	LIMESTONE
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

**Land Transport (New Zealand)**

NZS5433

<b>Proper Shipping Name</b>	LIMESTONE
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

**Land Transport (United States of America)**

US DOT

<b>Proper Shipping Name</b>	LIMESTONE
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

**Sea Transport**

IMDG Code

<b>Proper Shipping Name</b>	LIMESTONE
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available

<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>EMS</b>	No Data Available
<b>Marine Pollutant</b>	No

#### Air Transport

IATA DGR

<b>Proper Shipping Name</b>	Limestone
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

#### National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

<b>Dangerous Goods Classification</b>	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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### 15. REGULATORY INFORMATION

<b>General Information</b>	No Data Available
<b>Poisons Schedule (Aust)</b>	Not scheduled

#### Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

<b>Approval Code</b>	Not Assessed
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#### National/Regional Inventories

<b>Australia (AICS)</b>	Not Listed
<b>Canada (DSL)</b>	Not Determined
<b>Canada (NDSL)</b>	Not Determined
<b>China (IECSC)</b>	Not Determined
<b>Europe (EINECS)</b>	215-279-6
<b>Europe (REACH)</b>	Not Determined
<b>Japan (ENCS/METI)</b>	Not Determined
<b>Korea (KECI)</b>	Not Determined
<b>Malaysia (EHS Register)</b>	Not Determined

<b>New Zealand (NZIoC)</b>	Not Determined
<b>Philippines (PICCS)</b>	Not Determined
<b>Switzerland (Giftliste 1)</b>	Not Determined
<b>Switzerland (Inventory of Notified Substances)</b>	Not Determined
<b>Taiwan (NCSR)</b>	Not Determined
<b>USA (TSCA)</b>	Not Determined

## 16. OTHER INFORMATION

<b>Related Product Codes</b>	LISTON1000, LISTON1001, LISTON2000, LISTON3000, LISTON4000, LISTON5000, LISTON6000, LISTON7000, LISTON7100
<b>Revision</b>	2
<b>Revision Date</b>	27 May 2015
<b>Reason for Issue</b>	SDS updated.
<b>Key/Legend</b>	<p>&lt; Less Than &gt; Greater Than  <b>AICS</b> Australian Inventory of Chemical Substances  <b>atm</b> Atmosphere  <b>CAS</b> Chemical Abstracts Service (Registry Number)  <b>cm<sup>2</sup></b> Square Centimetres  <b>CO<sub>2</sub></b> Carbon Dioxide  <b>COD</b> Chemical Oxygen Demand  <b>deg C (°C)</b> Degrees Celcius  <b>EPA (New Zealand)</b> Environmental Protection Authority of New Zealand  <b>deg F (°F)</b> Degrees Farenheit  <b>g</b> Grams  <b>g/cm<sup>3</sup></b> Grams per Cubic Centimetre  <b>g/l</b> Grams per Litre  <b>HSNO</b> Hazardous Substance and New Organism  <b>IDLH</b> Immediately Dangerous to Life and Health  <b>immiscible</b> Liquids are insoluable in each other.  <b>inHg</b> Inch of Mercury  <b>inH<sub>2</sub>O</b> Inch of Water  <b>K</b> Kelvin  <b>kg</b> Kilogram  <b>kg/m<sup>3</sup></b> Kilograms per Cubic Metre  <b>lb</b> Pound  <b>LC<sub>50</sub></b> LC stands for lethal concentration. LC<sub>50</sub> is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.  <b>LD<sub>50</sub></b> LD stands for Lethal Dose. LD<sub>50</sub> is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.  <b>ltr</b> or <b>L</b> Litre  <b>m<sup>3</sup></b> Cubic Metre  <b>mbar</b> Millibar  <b>mg</b> Milligram  <b>mg/24H</b> Milligrams per 24 Hours  <b>mg/kg</b> Milligrams per Kilogram  <b>mg/m<sup>3</sup></b> Milligrams per Cubic Metre  <b>Misc</b> or <b>Miscible</b> Liquids form one homogeneous liquid phase regardless of the amount of either component present.  <b>mm</b> Millimetre  <b>mmH<sub>2</sub>O</b> Millimetres of Water  <b>mPa.s</b> Millipascals per Second  <b>N/A</b> Not Applicable  <b>NIOSH</b> National Institute for Occupational Safety and Health  <b>NOHSC</b> National Occupational Health and Safety Commission  <b>OECD</b> Organisation for Economic Co-operation and Development  <b>Oz</b> Ounce  <b>PEL</b> Permissible Exposure Limit  <b>Pa</b> Pascal</p>



**ppb** Parts per Billion  
**ppm** Parts per Million  
**ppm/2h** Parts per Million per 2 Hours  
**ppm/6h** Parts per Million per 6 Hours  
**psi** Pounds per Square Inch  
**R** Rankine  
**RCP** Reciprocal Calculation Procedure  
**STEL** Short Term Exposure Limit  
**TLV** Threshold Limit Value  
**tne** Tonne  
**TWA** Time Weighted Average  
**ug/24H** Micrograms per 24 Hours  
**UN** United Nations  
**wt** Weight